

PRINTMAKING — NEW AND OLD TECHNOLOGIES — A CONVERSATION

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ABSTRACT: This paper, through a conversation between Professor Coldwell and Dr Laidler, considers the ongoing relationship between old and new technologies within fine art printmaking. In particular it explores how ideas move between virtual and real, and the need for printmakers to engage with physical objects. As case studies both authors reflect on the making of particular works, Laidler's Laser engraving *Murmurs from Earth* and Coldwell's laser cut relief prints *Lines and Branches*.

KEY WORDS: Printmaking. Digital. Lasercut. New technology. Xerox.

PAUL COLDWELL:

We should start this conversation with the fact that all art is made with technology, so in some ways there is a misnomer about this debate between old and new technologies being an exclusively contemporary issue. However the key aspect about digital technology, particularly different to other previous technologies, is that it is mathematically based as opposed to materially based. Once something is in digital code it has an immateriality about it. Its not tied to the physical world in terms of substance, materiality, size texture and dimensions. Martin C. Jürgens notes: "Every source, every idea is reduced to the same level: in the end, all pixels are equal. The final print does not differentiate between the source of the image either; it simply reflects the digital image".¹

PAUL LAIDLER:

So do you think that those inherent qualities of digital technology you have just mentioned attack the heart of Printmaking? Words such as 'materiality', 'tactility' and 'texture' are often associated with

the physical nature of the print process that is deeply ingrained in the language of printmaking, and the medium's sensibilities.

COLDWELL:

Printmaking is concerned with the act of transformation. We make the mark on an etching plate and that is transformed and translated into ink on a piece of paper, or we cut a stencil and that is turned into ink being pushed through a screen to make a screenprint, or a drawing in grease on a stone is transformed into ink on paper as a lithograph. So printmakers are well placed to think about these issues because we are always in this process of transformation and translation. How do you feel about this in your own work?

LAIDLER:

We mentioned about shifting an image or mark from one place to another. I think I like the anticipation of the unknown that comes with this process. For instance when you roll back the blankets on a press and then peel away the paper from the relief surface to reveal the results of this transformation it produces a kind of a magical moment. This may also have something to do with the indirectness of the process. Or what I'm trying to say is I like the feeling that I get when looking at the finished print in that it doesn't look like I made it — something else is now present that I hadn't anticipated. Having said that, as an art student I first became interested in making prints using an office Xerox machine. At the time I found the recording properties intriguing given that the flat recording area on the machine had been designed to copy 2D surfaces yet the potential remained to capture an unusual appearance of depth that was sensitive to the physical qualities of flatness. With this in mind, I recorded a range of different three-dimensional objects using the device's capacity to record surface sections and print at varying scales and magnifications. The resulting photocopies were then reconfigured and collaged to create a series of hybrid images as two-dimensional projections of three-dimensional space. I recall thinking that the work existed somewhere between photography and printmaking, and in hindsight this may have been my first experience of what was to follow when we consider how today digital technology has brought these two disciplines closer together. Although I had used traditional print processes prior to using the Xerox I believe I was attracted to the fact that the device was easier to operate, the results were immediate and it allowed me to work through permutations of ideas more quickly. Perhaps this was also what got me hooked on the indirectness or the relationship with control that I previously mentioned.

¹ Jürgens, M.C., *The Digital Print* 2009 London, Thames & Hudson, p.23

COLDWELL:

The artist Tim Head spoke of his interest in “the different type of space inherent in electronic scanning...” Essentially everything is flat. It’s scanning closely over the surface and encoding it.²

So for you it’s about surrendering a degree of control? You control the process but then the process controls the aesthetic or the final aesthetic. It’s more like shifting the area of your control, and if you have made the right decisions beforehand then the technology will complete that idea.

LAIDLER:

I think I’ve always been attracted to the possibilities of systems when making artworks or perhaps the intuition that comes with designing a system that, as you say, shifts the emphasis of control. In this instance I am interested in understanding what a system or process will provide, then how this resonates with an idea. I’m particularly interested in works that engage with a medium and its processes without literally being conceived in the medium that the ideas refer to. For instance Tim Head’s *Slow Life* ink drawing and Tom Friedman’s *Untitled Dollar Bill* collage apply systematic approaches that bring to mind the remote precision of digital programmes and the actuality of the handmade.

Tim Head’s hand drawn work is created according to the results of flipping a coin, if the coin lands heads up, a horizontal line is drawn and if the coin lands tails up, a vertical line is applied. The resulting image bears little relationship to the linear, regimented patterns associated with the binary functions employed in the work. Tom Friedman’s collage work is constructed from thirty-six dollar bills that were systematically cut into repeat grid patterns prior to being recombined to make one large dollar bill. Each of the squares in the reconfiguration is slightly offset from the other, in an analogue design that evokes the appearance of a pixelated image. The integration of the handmade and systematic method in these works draws upon our association with appearance, and assumptions about media, tools, processes and disciplines.

COLDWELL:

But Head works with both an idea of chance as well a direct use of technology, as with his *i series* of inkjets where they were the result of the printer in direct communication with the computer.

“They are no longer tied to the reproduction of an external source image. Instead they are a direct outcome of the medium’s internal characteristics”.³ (Head)

LAIDLER:

When thinking about the objective association with systems and making work in this manner, some of the most interesting results develop through the trace of subjective association or the human element. Perhaps this may also be a reminder that control of technology is an illusion given that humans make technologies.

Tim Head’s *i series* prints actually brings me to my next question about digital printmaking which has most commonly been associated with inkjet printing — yet I feel it is much more than inkjet, given the broadening possibilities of digital rendering devices that are available. What are your thoughts on this potentially nascent field?

COLDWELL:

Well as we previously mentioned about technologies being all-pervasive, in some ways it’s very difficult to talk about a digital print. For example some digital prints are scanned drawings, photographs or paintings that have been reproduced as inkjet prints. So in these cases the only aspect of the digital is that an original has been translated into code in order to print a multiple. That is one end of the spectrum.

At the other end, is the image that is worked on the computer using software such as Illustrator or Photoshop, where the image does not have any materiality until it is finally printed as inkjet. Or, as mentioned, artists like Head who use programming itself. So between these extremes there is a whole range of approaches. Of course we mustn’t forget that originally it was only artists like Laposky, Franke or Cohen that were themselves programmers, or could work with technical assistance and were able to access the equipment, who could make digital prints.⁴

But what interests me, is the way that artists are now using digital as one aspect of their armoury and they are bringing it to bear on all the other technologies they know, it does not have to be

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Ibid. p.14

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A recent exhibition at the V&A, *Digital Pioneers: Computer Generated Art & Design from the V&A’s collections*, 2009, presented this largely neglected field. Further information on these early pioneers can be found on <http://dam.org/timelines/artists>.

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Coldwell, P. & Rauch, B. *The Personalised Surface* 2009, London, FADE Research p.13

exclusively digital.⁵ This is certainly my approach, as I outline in the description of the making of *Lines and Branches*.⁶

LAIDLER:

Probably the most recent addition to the field of digital print technologies is 3D printing. The 3D printing process is a type of rapid prototyping that uses 3D modelling software and inkjet printing technology to build three-dimensional objects. The print process works “by depositing, fusing or solidifying material in successive layers, one on top of another, each layer corresponding to the cross-sectional shape of the object being built”.⁷

The technology’s relationship with the field of printmaking is self-evident, yet direct access to such expensive equipment remains an obstacle for the printmaker. It is also worth noting that within a university environment, rapid prototyping technologies tend to be part of engineering, architecture or product design departments rather than art departments. Collectively these circumstances appear to suggest that printmakers will have to wait their turn. However, the broadening possibilities that I previously mentioned may develop in far richer ways if printmaking programmes were to explore more collaborative and cross-disciplinary activity. I suppose if one was to take a few leaps and continue along this predominantly digital and cross-disciplinary route, would printmaking still be the most appropriate description for the resulting works, or “does a medium stay the same once it incorporates new technologies in its discourse?”⁸

⁵ See *New technologies, New opportunities in* Coldwell, P. *Printmaking: A Contemporary Perspective* 2010 London, Black Dog Publishers

⁶ *Lines and Branches* are set of laser cut woodcuts made by Paul Coldwell at the Centre for Fine Print Research, UWE Bristol, proofed and editioned by Paul Laidler, 2012. Further information on Coldwell’s work can be found on www.paulcoldwell.org

⁷ Walters, P., Huson, D., Parraman, C., Stanić, M. (2009) *3D Printing in Colour: Technical Evaluation and Creative Applications*, Impact 6 International Printmaking Conference, UWE Bristol, UK

⁸ *The Matrix: An Unstable Reality*, 28th Biennial of Graphic Arts in Ljubljana, Curators: Gülsen Bal & Alenka Gregorič, Petja Grafenauer, Jadranka Ljubičič and Tadej Pogačar [Internet]. Accessed 3 February 2011. Available from: <http://www.sculagrafica.it/arts-news/2721/>

Earlier in the day, and on a similar note, we mentioned the more recent re-emergence of the crafts and the way in which analogue and digital technologies have become integrated within the making process — to the point where they are seamless. It’s interesting to think about what digital craft actually is, despite the fact that this definition is not new in itself. Is it craft as we have come to know it through analogue practices that simply adopt digital technology using the same sensibilities to make physical artefacts? Or is it the reverse, where one’s craft is through languages and processes that embrace and are synonymous with digital? Words like ‘embedded’, ‘augmented’, ‘dematerialised’ and ‘virtuality’ might begin to offer insights upon this strand of digital craft.

I wonder what the latter looks like, I’m not sure we have really seen a lot of it yet, although there are some indications emerging. Perhaps I’m referring to this idea of the ‘digital native’.

COLDWELL:

If one steps back and considers the model of the average artist, they generally have very little equipment and are investing more in their time rather than hardware. I just wonder how many artists have the technology available to them in order to do the kind of playing and experimenting needed to become familiar enough with the material and the technology, in a way that in the past one became familiar with pencil and paper, paint and brushes. Even in college, the amount of time someone could spend in the studio is very limited and time with equipment and specialist technicians is even more limited. So I wonder if that impacts on this whole technology debate? It has also been the case that artists get involved with technologies and processes once they become cheaper and therefore accessible. Certainly with large format inkjet, this was the case, coupled with the development of better inks and printers that could accommodate a wide range of papers and substrates, the conditions were right for artists to ‘play’. Maybe this creates the conditions for a digital native?

LAIDLER:

Also, the development of open source that is effectively returning the material of this technology back to the user. Previously the act of writing or accessing code was a very specialist field but it is becoming more mainstream now. I also understand that basic programming language is being taught in schools, so perhaps the next generation will be armed with knowing how to read, write and think about programmes — essentially demystifying this idea of the computer as a black box that is still prominent today.

COLDWELL:

The younger generation have been brought up with the digital. It's just part of their everyday language and experience and they take it for granted, as opposed to my generation, and to a lesser extent yours that are involved in translation; seeing the digital in terms of analogue equivalent or analogue standard rather than it being itself.

LAIDLER:

I wonder if it will affect their relationship to the physical world?

COLDWELL:

This is a good question; will they be allowed to stay with an object long enough to develop a kind of relationship with it? Many devices do not work after 5 years, so things like phones and computers have a limited shelf life. There is a built-in obsolescence that removes that long-term, intimate relationship previous generations have come to know with possessions.

This is evident in our changing relationship with photography as we move from analogue to digital. Our photographs are now stored in the memory of our computers. They are now both vulnerable to viruses, crashes or human error, as well as requiring constant updating or order to retain access.

LAIDLER:

As I previously mentioned, it's interesting to think that in some ways digital technology has removed our previous relationships with the photographic process and its printed image as the disciplines of photography and printmaking have become much closer due to digital print technologies. I believe the development of the Iris printer may have been the device that initiated this converging of disciplines in the early 1990's. The Iris printer was the first high quality, continuous-tone, photographic, digital inkjet print device that attracted attention from some of the earlier pioneers of the digital print studio in the USA — such as Nash Editions, Cone Editions and Adamson Editions. Interestingly, Graham Nash and Mac Holbert of Nash Editions predominantly adopted the technology from a photographic perspective whereas Jon Cone and David Adamson approached the technology from a background in printmaking. Briefly speaking the potential for high-resolution output attracted the photographers, whilst the possibilities to print onto a range of textured and heavyweight papers sparked interest from the printmaking communities. Although there were initial concerns over print longevity, many of these obstacles were overcome within the first 10 years or so.

Today both photography and printmaking share the same digital hardware and software tools to produce printed images, and whilst I have worked on a number of print projects with printmakers and photographers, I still find that the sensibilities and discourses of the two disciplines are very much intact.

It's funny you should mention the changing relationship with photography, as despite having the possibility to take infinitely more shots with a digital camera, I personally have become more and more conscious of the extra time that is needed to view and edit hundreds of images. I also never really took to analogue photography, it was only after I had started using digital photography that I developed a new found curiosity in the analogue photographic process. In this sense, my analogue interest developed through digital technology.

COLDWELL:

What I miss is the delay and anticipation as the analogue film was processed and printed. Digital photography now gives immediate recall, I suppose photography in some way is about the present, but is now embedded within the present, whereas it used to be about the present but embedded in the past.

LAIDLER:

We are witnessing first hand how photography is evolving as a medium and an experience. As we mentioned earlier, digital technologies would appear to be the catalyst for this transition or enhancement that is taking place, especially when considering the potential to render the photographic image from 2D into 3D using scanning and rapid prototyping technologies.

In the sculptural works of Robert Lazzarini the appearance of three-dimensional virtual space is made within the physical rendering of his distorted everyday objects. The uncanny aspect about this work is when the sculptures are photographically recorded — in that the physical distortion within the sculpture now creates a perceptual distortion as a photograph.⁹ The actuality of the sculpture and its photographic image creates an oscillation between virtual and real space, and digital and physical appearance. In some ways it prompts a mediatory experience of the real or the photographic aspect of representation that I understand is something that you draw upon in your work?

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The artist Robert Lazzarini's website, [Internet]. Accessed 1 November 2010. Available from: <http://www.robertlazzarini.com/>

COLDWELL:

Well whilst I am interested in the way that photography moves incessantly towards a greater and greater fidelity, in my own work I am moving in the opposite direction, toward the use of reduced halftone images, where the information is minimal and the photographic is degraded.

LAIDLER:

I am more obviously involved with the language of digital, and here there is a clear link to science fiction. I have found myself reflecting upon this in my own practice especially, and considering how environment has an impact upon the type of artwork you make. I actually remember the artist Neeta Madahar whom I was helping to produce a digital print, passing a comment that some of my work had a technological and science fiction feel to it. I remember considering this for a moment, then looking around at the digital studio that the work had been produced in. In this instance, the studio at CFPR was a clinical space, housing uniform structures that are essentially constructed from plastic and aluminium surfaces. Beneath the surface each device conceals its function through an interconnected network of electric circuitry that is accessed through the pushing of buttons and reading of surface displays. So without really thinking about it, I replied that it seemed inevitable that I would make the kind of work I do as I practically work on the bridge of the Star Ship Enterprise.

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CAPTIONS FOR ILLUSTRATIONS

The images in this article are placed in its Portuguese version.

Figure 1: Paul Laidler *Murmurs from Earth*, Laser engraving in Black Somerset Paper, 2012.

Figure 2: Paul Coldwell proofing *Lines and Branches* at UWE, Bristol 2012.

Figure 3: Paul Coldwell. *Lines and Branches*. Relief print from laser cut woodblocks, 2012, 56 x 76cm.



PAUL COLDWELL: Professor in Fine Art at the University of the Arts London. He is a printmaker and sculptor and has written widely on printmaking including the book, *Printmaking: A Contemporary Perspective* published by Black Dog Publishers in 2010.



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